

Project Management Office



FMTV

Family of Medium Tactical Vehicles

NDIA TWV CONFERENCE MONTEREY

Project Manager

COL Robert B. Lees



January 29, 2001



PM-MTV

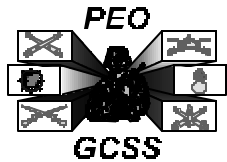


10th SFG (A) Receives First FMTV A1 Trucks



***“...this is not just a truck for us, this is
part of an essential lifeline for soldiers
of 10th Special Forces Group....”***

- LTC Waltemeyer, 10th SFG (A) - Ft. Carson - A1 FUE - JUL '00



FMTV "Not Just a Truck"

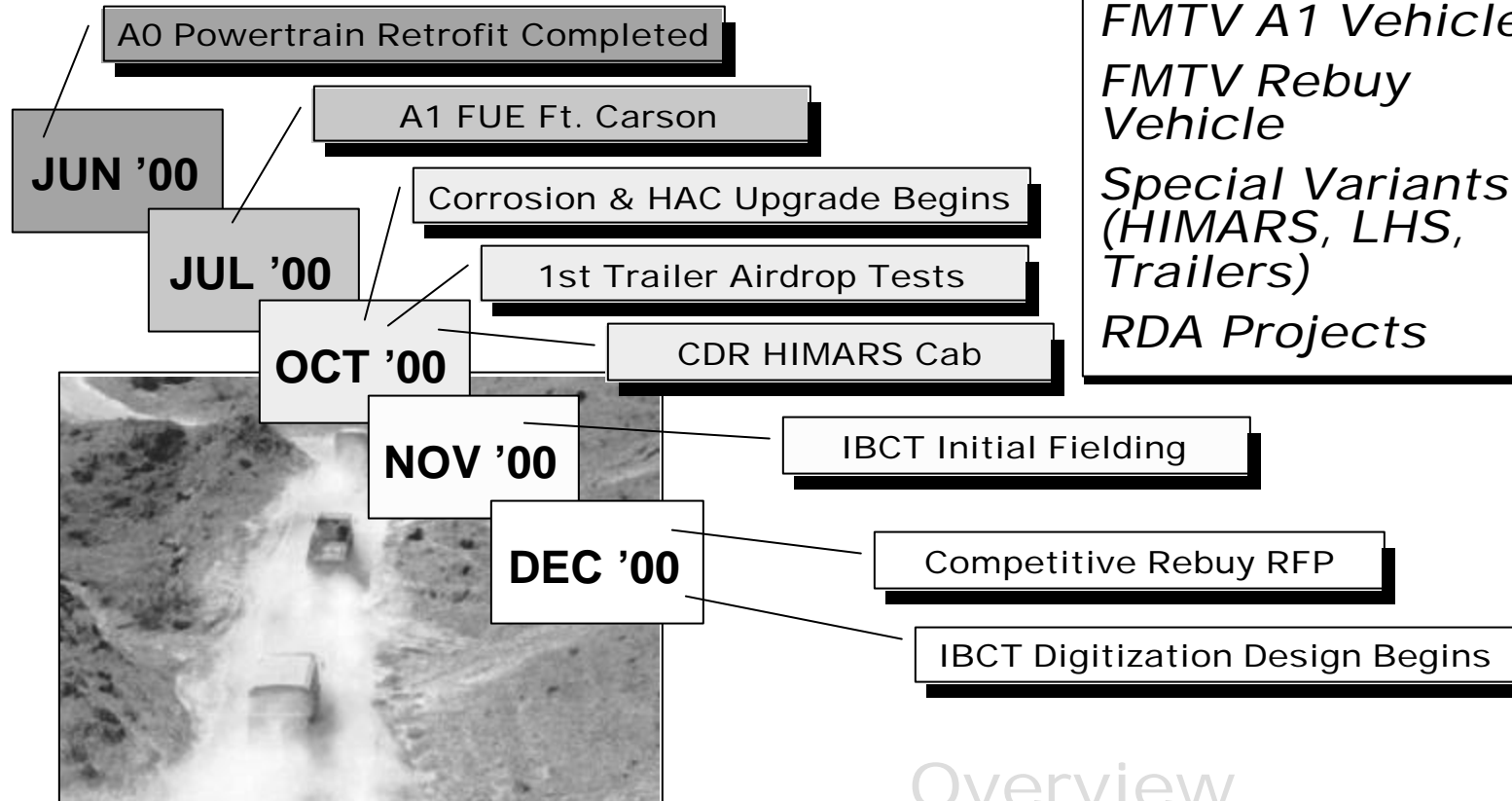


★ **CONSISTENT READINESS
WELL ABOVE ARMY GOALS**



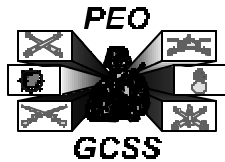
**IMPLEMENTING CHANGE
ON A CONTINUUM**

FMTV A0 Vehicle
FMTV A1 Vehicle
FMTV Rebuy Vehicle
Special Variants
(HIMARS, LHS, Trailers)
RDA Projects



Overview

January 2001

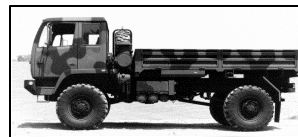
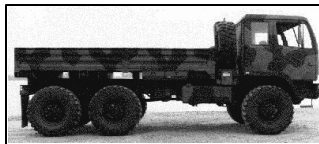


FMTV Family Concept



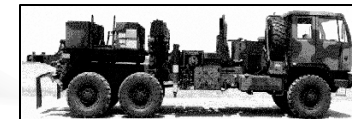
- **80% + Platform Commonality Between Vehicle Chassis**

- **Reduces Parts & Service Support Requirements**



Unit Resupply

Unit Mobility



Ammunition Resupply

Weapons Platform



Transport of Equipment/Personnel

- **14 Variants in 2 1/2 & 5-Ton Payload Class with Companion Trailers**



FMTV A1 Description



Technical Characteristics

- Incorporates Proven Commercial Components (CAT, Allison, Arvin Meritor, Dana ...)
- Meets or Exceeds Applicable Federal Motor Vehicle Standard System (FMVSS)
- Meets Applicable EPA Emission Standards
- Best Corrosion Resistance of Any Vehicle in Army Inventory

Onboard Material Handling Equipment Available



CAT- 3126 (7.2 Liter) Heavy-duty 6 Cylinder Turbocharged Diesel, Improved Cooling, EPA Compliant

SAE J1708/J1939 Databus for Interactive Electronic Technical Manual (IETM) Interface & Diagnostics

All Wheel Drive, Electronic CTIS, Superior Mobility & Ride Quality

Strategically Responsive

A0 & A1 Share

Same Basic Capabilities

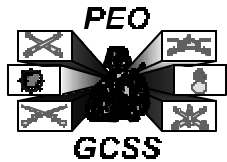
Program Events

- FUE JUL '00
- Fielded 500 Vehicles to Units at Ft Carson, Ft. Lewis and Hawaii
- Digitization Installation to IBCT
- Trailer FUE 3rd Qtr FY01

Dual-circuit Four Channel Air Anti-lock Braking System, With Exhaust Brake

Allison Automatic/Select 7 Speed, Electronically Controlled Transmission

January 2001



Delivering the Army's Transformation

Capable Reliable Maintainable Transportable



MULTI-MISSION / MULTI-PURPOSE VEHICLE DESIGNED FOR INCREASED MOBILITY

*Higher Ground Clearance, Super Single Tires,
CTIS, Increased Horse Power from Legacy Fleet*

ALL TERRAIN

Fording (36 inches), Grade Climb (60%), Side Slope (30%)

ALL ENVIRONMENT

Arctic, Tropical, Desert (-25 degrees F to +120 degrees F)*

RANGE - 300 Miles per Tank

** -50 degrees F with Arctic Kit*

Artillery Transport



Resupply



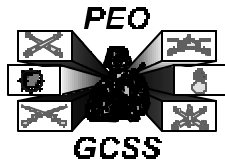
Wrecker Operations



HIMARS



FMTV Supports the Troops



Delivering the Army's Transformation

Capable Reliable Maintainable Transportable



ENGINEERED FOR HIGH RELIABILITY

Readiness Status of Major Weapons Systems (percentage)

Weapon System	Availability Goal	FY 00 Actual Availability
Avenger	90	98
FMTV	90	97
M1A2 Abrams Tank	90	95
M198	90	95
Patriot	90	95
MLRS	90	95
HMMWV	90	94
M2 Bradley Infantry Fighting Vehicle	90	93
M109	90	92
M3 Bradley Infantry Fighting Vehicle	90	92
M1A1 Abrams Tank	90	89
HEMTT	90	89
OH-58D Helicopter	75	85
UH-60 Helicopter	75	80
CH-47D Helicopter	75	73
AH-64 Helicopter	75	67

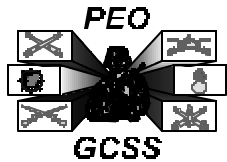
**Currently
97+%
Operational
Readiness**



Source: Readiness Integrated Data Base (RIDB)

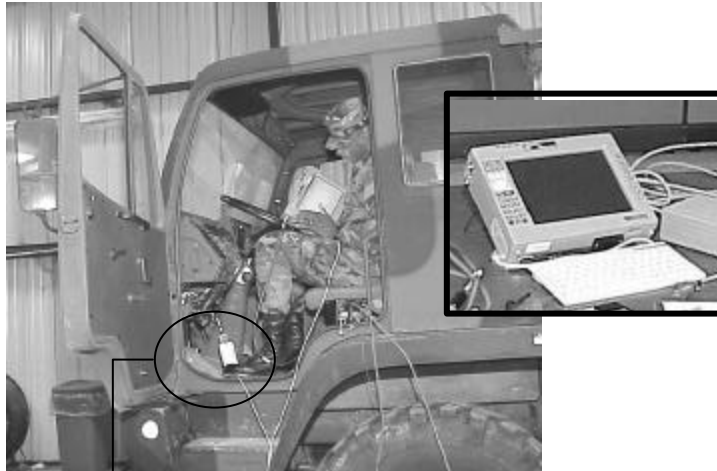
- **Exceeds Army Mean Miles Between Failure Requirement By More Than 200%**
- **35 Corrosion Enhanced Components Passed 22 Year Severe Environment Tests - APG**
- **Exceptionally High Operational Readiness (OR) Rate among Tactical Vehicles (97+%)**

FMTV Supports the Troops



Delivering the Army's Transformation

Capable Reliable Maintainable Transportable



**Soldier's Portable On-System
Repair Tool (SPORT)**

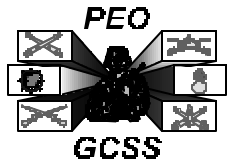


STATE OF THE ART DIAGNOSTICS

- Initiated 1997-98
- Interactive Diagnostics Thru SAE J1708/J1939 Data Bus Accessed w/SPORT ICE
- Four ECUs Wired to the Data Bus: Eng, XMSN, CTIS, & ABS (Retained Blink & Error Codes for Operators)
- **Class 5 Interactive Electronic Technical Manuals (IETM) on 5 Compact Discs (CDs)**
- **Projected Savings (totals)**
 - \$348M Replenishment Consumable Savings
 - \$980M Maintenance P&A Cost Avoidance

***IETM REDUCES COMPLEXITY OF
MAINTAINING HIGH TECH
AUTOMOTIVE COMPONENTS***

FMTV Supports the Troops



Delivering the Army's Transformation

Capable Reliable Maintainable Transportable



EXCELLENT DEPLOYABILITY

Sets New Standard for Rapid Air-load Preparation Time

Fits in C130... Aircraft Ready in 10 Minutes

Tractor RO/RO Inherent in Design, Sliding 5th Wheel

Integral Spreader-Bars for Helo-Lift & Ship Loading

Three Truck Variants and Both Trailers Air Drop Certified



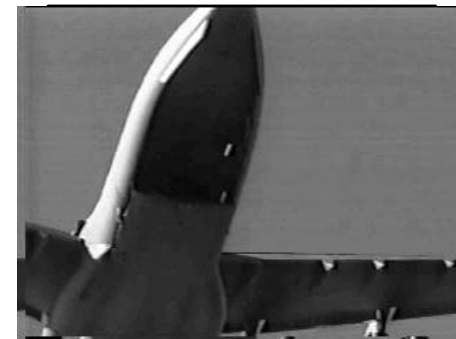
***Cab Over Design
Conserves Deck Space***



***Deployable on C-130
at Full Payload***



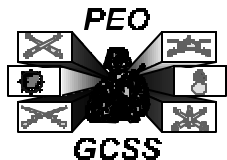
Sling Loadable by CH-47



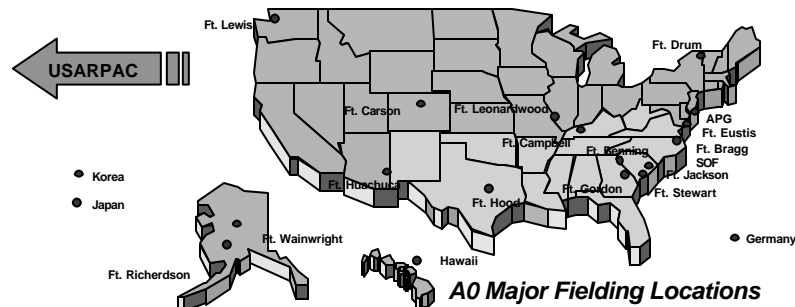
***Certified for Low Velocity
Airdrop (LVAD)***

FMTV Supports the Troops

January 2001



FMTV in the Field Today Supporting the Full Spectrum of Army Missions



A0 Major Fielding Locations

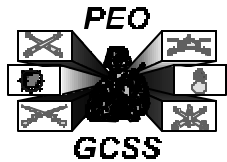
Total FMTV Vehicles Produced - 12,564
(A0 - 10,974 and A1 - 2,075)

**Fielded to 68 Locations Worldwide
Deployed to Bosnia and Kosovo**

**AA0 Vehicles
83,170**

FMTV Planned Fielding					
LOCATIONS		REQUIRED	QTY TO DATE	REMAINING	FIELDING DATES
TRADOC	Training & Spt	251	214	37	Nov 00 - Mar 01
Ft Bragg	82 AB, XVIII Corps	2693	2649	44	Oct 99 - Mar 01
Ft Campbell	101 AA, XVIII Corps	1413	1413	0	Nov 99 - Jan 01
USARPAC	25 ID, CSG, 9 RSC	839	721	118	Oct 99 - Mar 01
Ft Lewis	25 ID, 2 ID, CSG	375	312	63	Jan 00 - Apr 01
iBCT #1		160	106	54	Oct 00 - Apr 01
Korea	2ID, 19 TAACOM	2384	1420	964	Oct 99 - Dec 02
Ft Drum	10 MN	646	294	352	Dec 99 - Oct 02
Ft Stewart	3 ID, CSG	1581	860	721	Nov 99 - Sep 01
Ft Hood	1 CAV, CSG, III Corps	2173	820	1353	Oct 99 - Sep 01
Ft Hood	4 ID	1016	0	1016	Dec 01 - Oct 02
Ft Carson	3 ACR	400	400	0	Oct 99 - Nov 00
Ft Benning	3 ID, CSB	278	194	84	Nov 99 - Oct 01
Alaska	172 SIB	373	0	373	Apr 01 - Sep 01
TOTALS (Major Fielding Sites)		14,582	9,403	5,179	Oct 99 - Dec 02

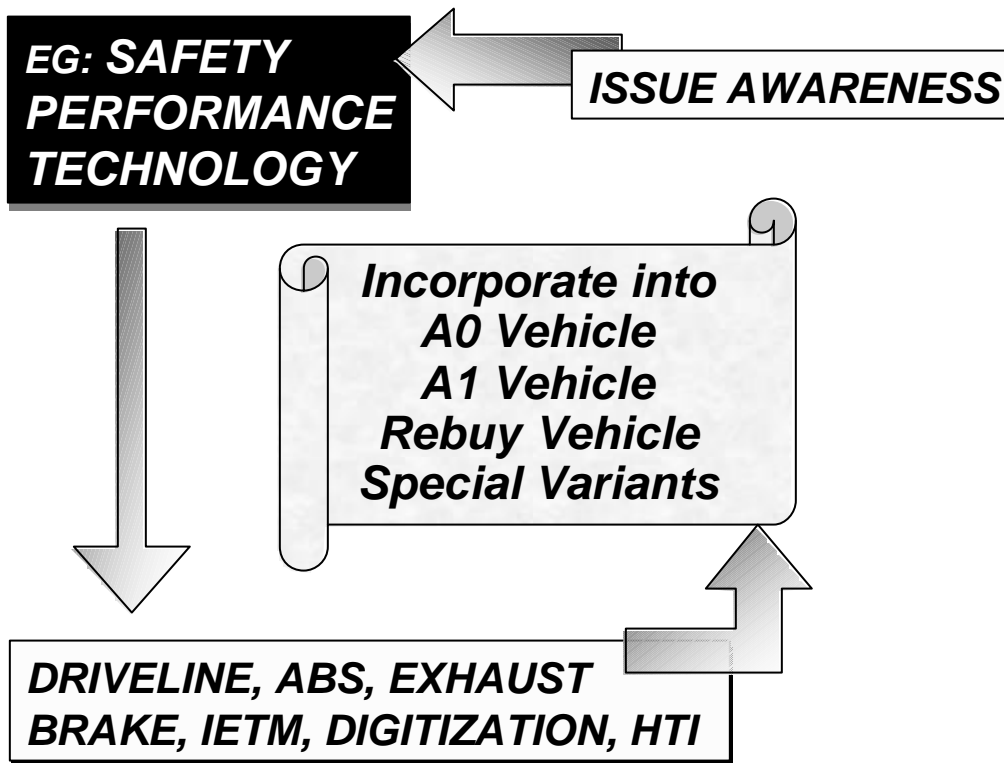
FMTV Supports the Troops



FMTV Cycle for Improvements



Insert Technology Maintain Production & Fielding Continue Logistics Support



Soldier Magazine, Mar 00

FMTV Supports the Troops

Response



Delivering What the Soldier Needs



Recognize Issues

Soldier Feedback
PM and Stewart & Stevenson Site Visits
Field Sustainment Database
NCO Councils Now in Place
Field Service Representatives (FSRs)

Implement Solutions

Hydraulic Cab Tilt Cylinders
C6 Transmission Bolt Replacements
Arctic Kit
Redesign Tie-Downs

Examples of Implemented Soldier Suggestions

- *Improvements to IETM, RPSTL*
- *XMSN Maintenance Procedure*
- *Analysis of Service Intervals-Change from Time/Miles to Hard Miles*
- *Tow-Pintle Extensions*
- *Supplemental Mirrors (Korea)*
- *Inclinometer Kit*

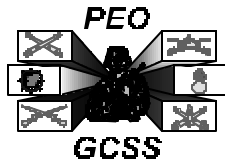


Soldier Magazine, Mar 00

Communication with the Field Gets Results

- *PM (POCs) - Direct Phone Lines, E-mail, Letters, Forms*
- *MTV Outreach Packages, Website, Maintenance Newsletter*

FMTV Supports the Troops



FMTV Supports Extended Life Cycle



ISSUE: Corrosion Discovered in Early A0 Vehicles During Extensive Testing and Severe Environment Use

SOLUTION: Corrosion Improvements Designed and Integrated Into A0 Production to Meet 22 Year Protection Improvements Incorporated Into A1 Model Production and Rebuy Requirements

- ***Two Sided Galvanized Cab***
- ***Corrosion Resistant Floor Coating***
- ***Improved Machine Gun Gasket and Sealant***
- ***Stainless Steel Exhaust***
- ***Dacromet Coated Fasteners***
- ***Brass Bottom Radiator***
 - With Chip Resistant Coating Bottom Fins***
- ***Aluminum Surge Tank***
- ***Electroless Nickel Heat Exchanger***



A0 Test Vehicle

- ***Corrosion Improvement Effort Developed Test Facility at Aberdeen***
- ***Team Included Members of PM-MTV, Stewart & Stevenson, TARDEC, ATC, GM, Academia and Corrosion Consultants from Ocean Research***

Response

January 2001



FMTV Supports User Upgrades & Enhancements



ISSUE: Powertrain Reliability

SOLUTION: Power Train Retrofit

Completed 6 Months Ahead of Schedule

ISSUE: Convenience & Accessibility

SOLUTION: HAC Upgrades and Improvements

Cab Lift Cylinder, Transmission Harness Mods, Cab Door Mods, Caging Bolts (MTV), Tail Light Carrier Mods, Heater Cage Guard, Air Tank Valve Guard, Brake Pedal Improvement

ISSUE: Dump Capability

SOLUTION: Dump Upgrades

Modify Cab Controls, Upgrade Hydraulics, Reinforce Dump Bed, Install Bed Liner, Improve Tailgate Strength

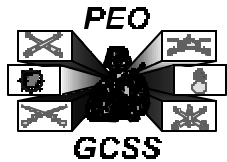


A1 Test Vehicle

***Readiness
Consistent At
97+% For Fleet***

Response

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FMTV Supports Enhanced Maintainability



ISSUE: Ease of Maintenance

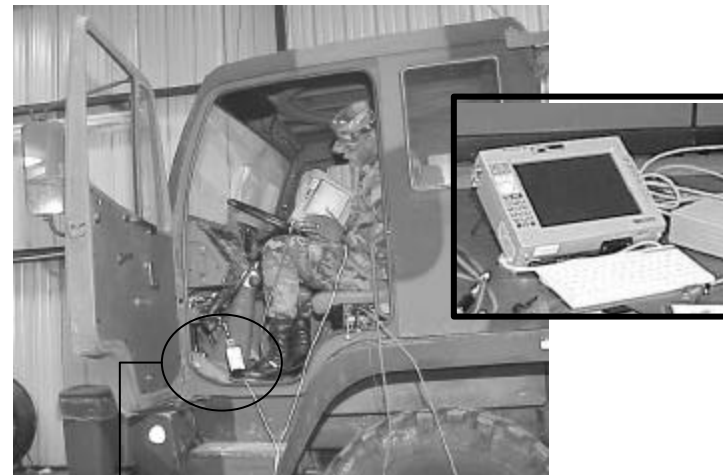
SOLUTION: IETM (Interactive Electronic Technical Manuals)

Intrusive Diagnostics via Data Bus

- ***Lowers Maintenance Burden***
- ***Automated Troubleshooting***
- ***TM Search Capability***
- ***Direct Links from Task to RPSTL***

Description

- ***5 CDs Replace Cumbersome Paper TMs (28,000 pages of paper)***
- ***Interfaces with 4 Vehicle Electronic Control Units via J1708/J1939 Databus Card***
- ***Incorporates Operator's Manuals, All Level Maintenance Manuals and an Illustrated Parts Manual into Single Program***



Soldier's Portable On-System Repair Tool (SPORT)



Response

January 2001



FMTV Logistics Initiatives



FIELD SERVICE REPRESENTATIVES (FSRs)

in 18 Locations

“PASS-THROUGH” WARRANTY

Selected Major Components

TOTAL PACKAGE FIELDING

Tech Manuals: Paper -10 & IETMs for A1

Tools (Special & Fabricated)

Spares (ASL)

Contractor Fielding Teams (DI Depro/H/O/NET)

NEW EQUIPMENT TRAINING PACKAGE

Incorporates use of IETMs & SPORT for A1

Maintenance (Unit/DS 80 hrs GS 120 hrs)

Operator (20 to 40 hrs Model Dependent) (Basic Cargo 20 hrs)

RAILS * (WEB Based Database Management System)

Field Issues Database

Drawings/Configuration Management

Product Quality Deficiency Reports (PQDRs)

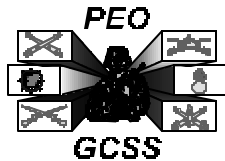


Response

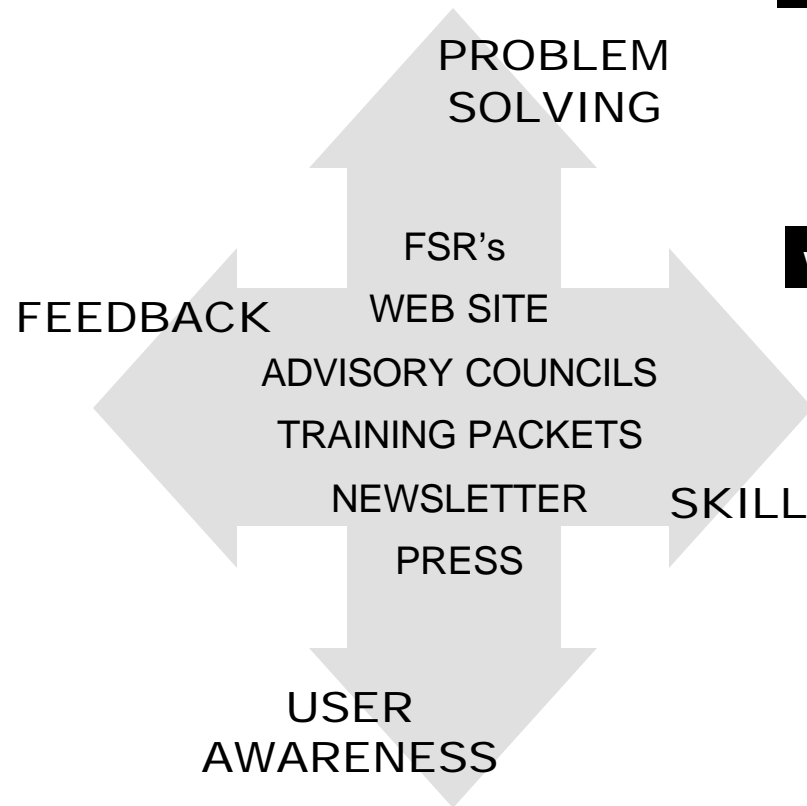
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FMTV Communication/Outreach



www.tacom.army.mil/gcss/pm_mtv

Expanded Web Page to Include Updates to Issues As They Are Solved

Database to Track Field Inquiries (Customer Service Page)

FMTV Newsletter

www.logsa.army.mil

LOGSA Link for ETM Downloads

(FMTV ETM 0122)

Increased Joint PM, TSM, Stewart & Stevenson Visits to the Field, Focused on High Density Posts

Established Many NCO Advisory Councils at the Installation Level to Assist in Identifying and Solving Issues

Developed Outreach Packet to "Train the Trainer"

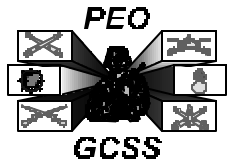
Field Service Representative (FSR) Up To 18 News Releases, and "PS Magazine" Articles on Special Interest Items

FMTV Supports the Troops

January 2001

PM-MTV

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FMTV Integrates New Technology for Objective Force



HORIZONTAL TECHNOLOGY INTEGRATION (HTI)

- Digitization (FBCB2, EPLARS, DVE, MTS)
- Battery Health & Maint Package
- Advanced Lighting Package
- Collision Warning Suite
- Weight Sensor for Dump Truck

21ST CENTURY TRUCK

- Hybrid Electric Drive Propulsion
- Advanced Diesel Propulsion Systems
- Variable Speed Transmission
- Advanced Structures & Composites
- Variable Height Active Suspension Systems
- Advanced Crew Station Reconfigurable Controls & Displays
- Movement Tracking System, GPS, Collision Avoidance System
- Signature Management & Lightweight Modular Armor

ARMY TRANSFORMATION

Shatter Resistant Glass - Cab Prototype Test



FMTV RDA



Leverage Highly Reliable Chassis

HIMARS (Weapons Platform) Engineering Maturation Development Phase

- *Providing Automotive Expertise to PM HIMARS*
- *Engineering Maturation Development (FY01-02)*

*6 Launcher Vehicles, 2 Resupply Vehicles
w/MHE, 2 Companion 5-Ton Trailers*

CAMEL

- *Analyze Trailer to Establish Parameters for Potable Water Pod*
- Lower Center of Gravity, Temperature Control*



LHS (Load Handling System)

- *New Development on FMTV Chassis*

Prototype Targeted 1st Qtr FY02

Using Existing M1077 & M3 Crop Flat-racks

*New Container Handling Unit (CHU) (8 1/2 Ton
Capacity Goal)*

Insert Technology Maintain Production & Fielding Continue Logistics Support



Summary



FMTV

- Supports the Troops
- Is the World's Best Medium Tactical Truck Family
- Delivers the Army's Transformation
- Responds to Soldiers' and Army's Needs
- Teams PM and Contractor to Make a Great Truck Better

"...this is not just a truck for us, this is part of an essential lifeline for soldiers of the 10th Special Forces Group...."